

ABSTRACT OF THE DISCLOSURE

Instead of using a link manager to load and unload current and next transmit and receive buffers in the Bluetooth baseband controller, this function is performed instead by a packet generator without the use of additional buffers. The packet generator segments the HCI ACL data packets into segments and builds a Bluetooth data packet from each segment, a channel access code, a header and any acknowledgments for transmission to a corresponding Bluetooth device. The packet generator also extracts the data from a Bluetooth data packet received and stores the data into a HCI ACL/SCO buffer to assembly the HCI ACL data packet. Therefore, the bottle neck which otherwise may be caused by the slowness of the link manager is removed. System performance and bandwidth utilization are both enhanced.